
		<h1 style="margin: 0;">SAFETY DATA SHEET</h1>										Page 1 of 6 <b>KIK-004</b>		
Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards					SDS Revision: 1.8			SDS Revision Date: 1/1/2018						
<b>1. PRODUCT &amp; COMPANY IDENTIFICATION</b>														
1.1	Product Name:	<b>JOHN PAUL MITCHELL SYSTEMS - AWAPUHI WILD GINGER SHINE SPRAY 55% VOC</b>												
1.2	Chemical Name:	Aerosol												
1.3	Synonyms:	John Paul Mitchell Systems - Awapuhi Wild Ginger Shine Spray 55%VOC - B9251C												
1.4	Trade Names:	John Paul Mitchell Systems - Awapuhi Wild Ginger Shine Spray												
1.5	Product Uses & Restrictions:	Professional and Cosmetic Use												
1.6	Distributor's Name:	KIK Custom Products.												
1.7	Distributor's Address:	2030 Old Candler Road, Gainesville, GA 30507 USA												
1.8	Emergency Phone:	<b>CHEMTEL: +1 (813) 248-0585 / +1 (800) 255-3924 (CN – MIS0002907)</b>												
1.9	Business Phone / Fax:	+1 (770) 534-0300 / +1 (770) 534-8954												
<b>2. HAZARDS IDENTIFICATION</b>														
2.1	Hazard Identification:	<p>This product is classified as a HAZARDOUS SUBSTANCE and as DANGEROUS GOODS according to the classification criteria of NOHSC:1008 (2004) and ADG Code (Australia).  <b>DANGER! EXTREMELY FLAMMABLE AEROSOL. CAUSES EYE IRRITATION.</b>  <u>Classification:</u> Aerosol Level 2, Category 1 Aerosol; Extremely Flammable Aerosol  <u>Hazard Statements (H):</u> H222 – Extremely Flammable aerosol. H229 – Pressurized container: may burst if heated. H320 – Causes eye irritation.  <u>Precautionary Statements (P):</u> P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No Smoking. P211 – Do not spray on an open flame or other ignition source. P251 – Do not pierce or burn, even after use. P261 – Avoid breathing vapor/spray. P264 – Wash thoroughly with soap and water after handling. P271 – Use only in a well-ventilated area. P280 – Wear eye protection. P410+P412 – Protect from sunlight. Do not expose to temperature exceeding 50 °C (122 °F). P304+P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. P337+P313 – If eye irritation persists: Get medical advice/attention. P101 If medical advice is needed, have product container or label at hand. P102 – Keep out of reach of children. P501 – Dispose of contents/container to licensed and permitted disposal or recycling facility.</p>												
<b>3. COMPOSITION &amp; INGREDIENT INFORMATION</b>														
CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m <sup>3</sup> )									OTHER
					ACGIH		NOHSC			OSHA				
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH		
ISOBUTANE	75-28-5	TZ4300000	200-857-2	15-40	600	750	NF	NF	NA	NA	NA	NA		
	Flam. Gas 1; H220													
CYCLOTETRAILOXANE	556-67-2	NA	209-136-7	15-40	NA	NA	NF	NF	NF	NA	NA	NA		
	Flam. Liq. 2; H225													
ETHANOL (SD ALCOHOL 40B)	64-17-5	KQ6300000	200-578-6	10-30	1000	3000	1000	1800	NF	1000	1900	3300		
	Flam. Liq. 2; H225													
PROPANE	74-98-6	TX2275000	200-827-9	5-10	1000	NA	1000	NF	NF	1000	NA	2100		
	Press. Gas 1; Flam. Gas 1; H220													
<b>4. FIRST AID MEASURES</b>														
4.1	First Aid:	<p><u>Ingestion:</u> If ingested, do not induce vomiting! If product has been swallowed, drink plenty of water or milk IMMEDIATELY. If the patient is vomiting, continue to offer water or milk. Never give water or milk to an unconscious person. Contact the nearest Poison Control Center or local emergency number. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed.</p> <p><u>Skin:</u> If irritation occurs &amp; product is on the skin, rinse thoroughly with lukewarm water, followed by a thorough washing of the affected area with plenty of soap and water. Remove contaminated clothing and wash thoroughly before reuse. If irritation, redness or swelling persists, consult a physician immediately.</p> <p><u>Eyes:</u> If product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes. Raise and lower eyelid(s) while flushing to ensure thorough irrigation. If problems persist seek immediate medical attention.</p> <p><u>Inhalation:</u> Remove victim to fresh air and keep comfortable for breathing. If breathing is difficult, administer supplemental oxygen and seek immediate medical attention. If breathing stops, perform artificial respiration.</p>												

## 4. FIRST AID MEASURES – cont'd

4.2	Effects of Exposure:	<p><b>Ingestion:</b> If product is swallowed, may cause nausea, vomiting and/or diarrhea and central nervous system depression.</p> <p><b>Eyes:</b> Moderately irritating to the eyes.</p> <p><b>Skin:</b> May be irritating to skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some sensitive individuals upon prolonged or repeated exposure.</p> <p><b>Inhalation:</b> Vapors of this product may be moderately irritating to the nose, throat and other tissues of the respiratory system. Symptoms of overexposure can include coughing, wheezing, nasal congestion, and difficulty breathing. Inhalation of concentrated vapors can cause central nervous system depression (e.g., drowsiness, dizziness, headaches, nausea).</p>											
4.3	Symptoms of Overexposure:	<p><b>Ingestion:</b> May cause nausea, vomiting and/or diarrhea and central nervous system depression.</p> <p><b>Eyes:</b> Overexposure in eyes may cause redness, itching and watering (risk of serious damage to eyes). Contact may cause mild eye irritation including stinging, watering and redness.</p> <p><b>Skin:</b> Prolonged contact with skin may result in bleaching and irritation of skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some sensitive individuals. Symptoms of skin overexposure may include redness, itching, and irritation of affected areas.</p> <p><b>Inhalation:</b> Symptoms of overexposure can include coughing, wheezing, nasal congestion, and difficulty breathing.</p>											
4.4	Acute Health Effects:	Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea.											
4.5	Chronic Health Effects:	No harmful or chronic health effects are expected to occur from a single accidental ingestion. These ingredients may be irritating to skin and mucous membrane of the eye and respiratory system. Overexposure may trigger asthma-like symptoms in some sensitive individuals. May also induce skin sensitization and respiratory hypersensitivity. Possible allergic dermatitis.											
4.6	Target Organs:	Eyes, skin, respiratory system.											
4.7	Medical Conditions Aggravated by Exposure:	Acute health hazards may be delayed. Most common symptoms include irritating properties to eyes, respiratory system and skin. Existing dermatological conditions (such as eczema) and respiratory conditions (such as bronchial asthma and/or bronchitis) may be exacerbated.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #0056b3; color: white;"><b>HEALTH</b></td> <td style="text-align: center;"><b>1</b></td> </tr> <tr> <td style="background-color: #ff0000; color: white;"><b>FLAMMABILITY</b></td> <td style="text-align: center;"><b>3</b></td> </tr> <tr> <td style="background-color: #ff8c00; color: white;"><b>PHYSICAL HAZARDS</b></td> <td style="text-align: center;"><b>0</b></td> </tr> <tr> <td colspan="2" style="background-color: #000000; color: white;"><b>PROTECTIVE EQUIPMENT</b></td> </tr> <tr> <td style="background-color: #000000; color: white;"><b>EYES</b></td> <td style="background-color: #000000; color: white;"><b>SKIN</b></td> </tr> </table>	<b>HEALTH</b>	<b>1</b>	<b>FLAMMABILITY</b>	<b>3</b>	<b>PHYSICAL HAZARDS</b>	<b>0</b>	<b>PROTECTIVE EQUIPMENT</b>		<b>EYES</b>	<b>SKIN</b>
<b>HEALTH</b>	<b>1</b>												
<b>FLAMMABILITY</b>	<b>3</b>												
<b>PHYSICAL HAZARDS</b>	<b>0</b>												
<b>PROTECTIVE EQUIPMENT</b>													
<b>EYES</b>	<b>SKIN</b>												

## 5. FIREFIGHTING MEASURES

5.1	Fire & Explosion Hazards:	Level 2 Aerosol (NFPA 30B), (category 1 extremely flammable aerosol). Aerosols may burst at temperatures above 120 °F. Cool uninvolved containers to prevent possible bursting. Aerosols may be projectile hazards when bursting. If aerosols are bursting, stay clear until bursting is complete. Containers may rupture and release flammable liquids or/and exposed gasses if exposed to the heat of fire. Keep containers cool by spraying them with water until the fire has been extinguished.	
5.2	Extinguishing Methods:	Water Fog, Foam, Dry Chemical, CO <sub>2</sub>	
5.3	Firefighting Procedures:	As in any fire, wear MSHA/NIOSH approved self-contained breathing apparatus (pressure-demand) and full protective gear. Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Fight fire upwind. Avoid spraying water directly into storage containers because of danger of boil over. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.	

## 6. ACCIDENTAL RELEASE MEASURES

6.1	Spills:	Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment. Plastic or rubber gloves, respirator, eye protection and apron may be required for clean-up of large spills. <p><b>Small Spills:</b> Wear appropriate protective equipment including gloves and protective eyewear. Use a non-combustible material such as vermiculite or sand to soak up the product and place into a container for later disposal. Do not use water or a material such as "speedy dry" to soak up material. Sweep up material using non-sparking materials (e.g., plastic brooms, shovels, dustpans) and place into a plastic container or plastic liner within another container.</p> <p><b>Large Spills:</b> Keep incompatible materials (e.g., organics such as oil) away from spill. Stay upwind and away from spill or release. Isolate immediate hazard area and keep unauthorized personnel out of area. Stop spill or release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant.</p>
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Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 &amp; 1272/2008/EC Standards

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## 7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices:	Do not eat, drink or smoke when handling this product. Contents under pressure. Handle as to avoid puncturing container(s). When used as intended, no additional protective equipment is necessary. Use chemical goggles if eye contact is possible. Wash unintentional residues with soap and warm water.
7.2	Storage & Handling:	Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans) away from heat and direct sunlight. Avoid temperatures above 120 °F. Keep away from incompatible substances. Protect containers from physical damage. To avoid unintentional spraying keep cap in place when not in use.
7.3	Special Precautions:	Spilled material may present a slipping hazard if left unattended. Clean all spills promptly.

## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Exposure Limits: ppm (mg/m <sup>3</sup> )		ACGIH		NOHSC			OSHA			OTHER
		<b>CHEMICAL NAME(S)</b>	TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	
		ISOBUTANE	600	750	NF	NF	NA	NA	NA	NA	
		ETHANOL (SD ALCOHOL 40B)	1000	3000	1000	1800	NF	1000	1900	3300	
		PROPANE	1000	NA	1000	NF	NF	1000	NA	2100	
8.2	Ventilation & Engineering Controls:	General mechanical (e.g., fans) or natural ventilation is sufficient when this product is in use. Use local or general exhaust ventilation to effectively remove and prevent buildup of vapors or mist generated from the handling of this product.									
8.3	Respiratory Protection:	No special respiratory protection is required under typical circumstances of use or handling. In instances where dusts of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia.									
8.4	Eye Protection:	Avoid eye contact. None required under normal conditions of use. Safety glasses could be used when handling or using large quantities of this product.									
8.5	Hand Protection:	None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. When handling large quantities (e.g., ≥ 1 gallon (3.8 L)), wear rubber, nitrile or impervious plastic gloves.									
8.6	Body Protection:	No apron required when handling small quantities. When handling large quantities (e.g., ≥ 5 lbs), eye wash stations and deluge showers should be available. Upon completion of work activities involving large quantities of this product, wash any exposed areas thoroughly with soap and water.									



## 9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Appearance:	Aerosol. Clear oily liquid.
9.2	Odor:	Characteristic
9.3	Odor Threshold:	NA
9.4	pH:	NA
9.5	Melting Point/Freezing Point:	NA
9.6	Initial Boiling Point/Boiling Range:	NA
9.7	Flashpoint:	-30 °F (-34 °C) TCC for Propellant only; 36 °F (2.2 °C) EPA Method 1010 for Concentrate
9.8	Upper/Lower Flammability Limits:	LEL: 1.8 % / UEL: 9.5 %
9.9	Vapor Pressure:	@ 20 °C (68 °F) - Can pressure not to exceed 180 psig @ 55 °C (131 °F) 12.4 bar
9.10	Vapor Density:	>1
9.11	Relative Density:	0.849 - 0.869
9.12	Solubility:	Soluble
9.13	Partition Coefficient (log P <sub>ow</sub> ):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	Aerosol at ambient temperature
9.17	Other Information:	Evaporation rate >1: Percent Volatile 55%

## 10. STABILITY & REACTIVITY

10.1	Stability:	Stable at normal temperatures.
10.2	Hazardous Decomposition Products:	Oxides of carbon (CO, CO <sub>2</sub> ) and sulfur (SO <sub>2</sub> ).
10.3	Hazardous Polymerization:	Will not occur.
10.4	Conditions to Avoid:	Excessive heat, direct sunlight, flames, heat sources and incompatible substances.
10.5	Incompatible Substances:	Mixture with strong acids, alkalis or oxidizers.

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## 11. TOXICOLOGICAL INFORMATION

11.1	Routes of Entry:	Inhalation: YES	Absorption: YES	Ingestion: YES
11.2	Toxicity Data:	This product was not tested on animals. Toxicology data, found in scientific literature, is available for some of the components of the product and is presented below:		
11.3	Acute Toxicity:	See Section 4.4		
11.4	Chronic Toxicity:	See Section 4.5		
11.5	Suspected Carcinogen:	NA		
11.6	Reproductive Toxicity:	This product is not reported to cause reproductive toxicity in humans.		
	Mutagenicity:	This product is not reported to produce mutagenic effects in humans.		
	Embryotoxicity:	This product is not reported to produce embryotoxic effects in humans.		
	Teratogenicity:	This product is not reported to cause teratogenic effects in humans.		
	Reproductive Toxicity:	This product is not reported to cause reproductive effects in humans.		
11.7	Irritancy of Product:	See Section 4.3		
11.8	Biological Exposure Indices:	NE		
11.9	Physician Recommendations:	Treat symptomatically.		

## 12. ECOLOGICAL INFORMATION

12.1	Environmental Stability:	There is no specific data available for this product.
12.2	Effects on Plants & Animals:	There is no specific data available for this product.
12.3	Effects on Aquatic Life:	The product itself has not been tested as a whole. There is no specific data available for this product.

## 13. DISPOSAL CONSIDERATIONS

13.1	Waste Disposal:	Review current local, state and federal laws, codes, statutes and regulations to determine current status and appropriate disposal method for the ingredients listed in Section 2. Any disposal practice must be in compliance with local, state, and federal laws and regulations. Contact the appropriate agency for specific information. A licensed facility or waste hauler must provide treatment, transport, storage and disposal of hazardous waste.
13.2	Special Considerations:	U.S. EPA Hazardous Waste – Characteristic – Ignitable (D001)

## 14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L); or CONSUMER COMMODITY, ORM-D (IP VOL ≤ 1.0 L) – until 12/31/2020	
14.2	IATA (AIR):	UN1950, AEROSOLS, FLAMMABLE, 2.1 (LTD QTY, IP VOL ≤ 0.5 L); or ID8000, CONSUMER COMMODITY, ORM-D (IP VOL ≤ 0.5 L)	
14.3	IMDG (OCN):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L)	
14.4	TDGR (Canadian GND):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L); or MARK PACKAGE "LIMITED QUANTITY," "LTD QTY," or "QUANT LTÉE" or "QUANTITÉ LIMITÉE"	
14.5	ADR/RID (EU):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L)	
14.6	SCT (MEXICO):	UN1950, AEROSOLS, 2.1 (CANTIDAD LIMITADA, IP VOL ≤ 1.0 L)	
14.7	ADGR (AUS):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L)	

## 15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements:	This product does not contain any substances subject to SARA Title III, section 313 reporting requirements.	
15.2	SARA Threshold Planning Quantity:	There are no specific Threshold Planning Quantities for the components of this product.	
15.3	TSCA Inventory Status:	The components of this product are listed on the TSCA Inventory.	
15.4	CERCLA Reportable Quantity (RQ):	NA	
15.5	Other Federal Requirements:	This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR Subchapter G, (Cosmetics).	
15.6	Other Canadian Regulations:	This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDL. None of the components of this product are listed on the Priorities Substances List. WHMIS Class B5 (Flammable Aerosol)	



## 15. REGULATORY INFORMATION – cont'd

15.7	State Regulatory Information:	<p><u>Isobutane</u> is found on the following state criteria lists: Massachusetts Hazardous Substances List (MA), Pennsylvania Right-to-Know List (PA), and New Jersey Right-to-Know List (NJ).</p> <p><u>Propane</u> is found on the following state criteria list: MA, MN, NJ, PA and WA.</p> <p><u>Ethanol</u> is found on the following state criteria list: FL, MA, MN, NJ, PA and WA.</p> <p><u>Cyclotertrasiloxane</u> is found on the following state criteria list: NJ and PA.</p> <p>No other ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI).</p>
15.8	Other Requirements:	<p>The primary components of this product are listed in Annex I of EU Directive 67/548/EEC.</p> <p><u>Isobutane</u>: Flammable (F+). <b>Risk Phrases (R):</b> 12 – Highly flammable. <b>Safety Phrases (S):</b> 2-9-16 – Keep out of reach of children. Keep container in a well-ventilated place. Keep away from sources of ignition – No smoking.</p> <p><u>Ethanol</u>: Flammable (F). <b>Risk Phrases(R):</b> 11 – Flammable. <b>Safety Phrases (S):</b> 2-7-16 – Keep out of reach of children. Keep container tightly closed. Keep away from sources of ignition – No smoking.</p> <p><u>Propane</u>: Flammable (F+). <b>Risk Phrases (R):</b> 12 – Highly flammable. (S): 2-9-16 – Keep out of reach of children. Keep container in a well-ventilated place. Keep away from sources of ignition – No smoking.</p> <p><u>Cyclotertrasiloxane</u>: Harmful (Xn). <b>Risk Phrases (R):</b> 53 – May cause long-term adverse effects in the aquatic environment. <b>Safety Phrases (S):</b> (2)-36/37 - 46 - 51 – 61 – Keep out of reach of children. Wear suitable protective clothing and gloves. If swallowed, seek medical advice immediately and show this container or label. Use only in well-ventilated areas. Avoid release to the environment. Refer to special instructions/safety data sheets.</p>



## 16. OTHER INFORMATION

16.1	Other Information:	<p><b>DANGER! EXTREMELY FLAMMABLE AEROSOL. CAUSES EYE IRRITATION. PRESSURIZED CONTAINER: MAY BURST IF HEATED. CAUSES EYE IRRITATION.</b></p> <p>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No Smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Avoid breathing vapor/spray. Wash thoroughly with soap and water after handling. Use only in a well-ventilated area. Wear eye protection. Protect from sunlight. Do not expose to temperature exceeding 50 °C (122 °F). IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. <b>KEEP LOCKED UP AND OUT OF REACH OF CHILDREN.</b></p>
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.
16.3	Disclaimer:	This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & KIK Custom Products' knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.
16.4	Prepared for:	<p><b>KIK Custom Products</b>                  2030 Old Candler Road                  Gainesville, GA 30507 USA                  Tel: +1 (770) 534-0300                  Fax: +1 (770) 534-8954  <a href="http://www.kikcorp.com">http://www.kikcorp.com</a></p>
16.5	Prepared by:	<p><b>ShipMate, Inc.</b>                  P.O. Box 787                  Sisters, Oregon 97759-0787 USA                  Tel: +1 (310) 370-3600                  Fax: +1 (310) 370-5700  <a href="http://www.shipmate.com">http://www.shipmate.com</a></p>

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## DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these that are commonly used include the following:

### GENERAL INFORMATION:

<b>CAS No.</b>	Chemical Abstract Service Number
<b>EXPOSURE LIMITS IN AIR:</b>	
<b>ACGIH</b>	American Conference on Governmental Industrial Hygienists
<b>C</b>	Ceiling Limit
<b>ES</b>	Exposure Standard (Australia)
<b>IDLH</b>	Immediately Dangerous to Life and Health
<b>OSHA</b>	U.S. Occupational Safety and Health Administration
<b>PEL</b>	Permissible Exposure Limit
<b>STEL</b>	Short-Term Exposure Limit
<b>TLV</b>	Threshold Limit Value
<b>TWA</b>	Time Weighted Average

### FIRST AID MEASURES:

<b>CPR</b>	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.
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### HMIS-III HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

<b>0</b>	Minimal Hazard	<table border="1"> <tr><td><b>HEALTH</b></td></tr> <tr><td><b>FLAMMABILITY</b></td></tr> <tr><td><b>PHYSICAL HAZARDS</b></td></tr> <tr><td><b>PERSONAL PROTECTION</b></td></tr> </table>	<b>HEALTH</b>	<b>FLAMMABILITY</b>	<b>PHYSICAL HAZARDS</b>	<b>PERSONAL PROTECTION</b>
<b>HEALTH</b>						
<b>FLAMMABILITY</b>						
<b>PHYSICAL HAZARDS</b>						
<b>PERSONAL PROTECTION</b>						
<b>1</b>	Slight Hazard					
<b>2</b>	Moderate Hazard					
<b>3</b>	Severe Hazard					
<b>4</b>	Extreme Hazard					

### PERSONAL PROTECTION RATINGS:

<b>A</b>		<b>G</b>	
<b>B</b>		<b>H</b>	
<b>C</b>		<b>I</b>	
<b>D</b>		<b>J</b>	
<b>E</b>		<b>K</b>	
<b>F</b>		<b>X</b>	Consult your supervisor or SOPs for special handling directions.

Safety Glasses	Splash Goggles	Face Shield & Protective Eyewear	Gloves
Boots	Synthetic Apron	Protective Clothing & Full Suit	Dust Respirator
Full Face Respirator	Dust & Vapor Half-Mask Respirator	Full Face Respirator	Airline Hood/Mask or SCBA

### OTHER STANDARD ABBREVIATIONS:

<b>ML</b>	Maximum Limit
<b>mg/m3</b>	milligrams per cubic meter
<b>NA</b>	Not Available
<b>ND</b>	Not Determined
<b>NE</b>	Not Established
<b>NF</b>	Not Found
<b>NR</b>	No Results
<b>ppm</b>	parts per million
<b>SCBA</b>	Self-Contained Breathing Apparatus

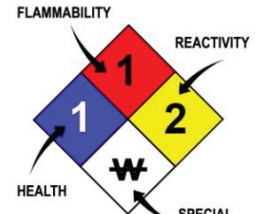
### NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

#### FLAMMABILITY LIMITS IN AIR:

<b>Autoignition Temperature</b>	Minimum temperature required to initiate combustion in air with no other source of ignition
<b>LEL</b>	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
<b>UEL</b>	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

### HAZARD RATINGS:

<b>0</b>	Minimal Hazard
<b>1</b>	Slight Hazard
<b>2</b>	Moderate Hazard
<b>3</b>	Severe Hazard
<b>4</b>	Extreme Hazard
<b>ACD</b>	Acidic
<b>ALK</b>	Alkaline
<b>COR</b>	Corrosive
<b>W</b>	Use No Water
<b>OX</b>	Oxidizer
<b>TREFOIL</b>	Radioactive



### TOXICOLOGICAL INFORMATION:

<b>LD<sub>50</sub></b>	Lethal Dose (solids & liquids) w/s
<b>LC<sub>50</sub></b>	Lethal concentration (gases) which kills 50% of the exposed animal
<b>ppm</b>	Concentration expressed in parts of material per million parts
<b>TD<sub>01</sub></b>	Lowest dose to cause a symptom
<b>TCLo</b>	Lowest concentration to cause a symptom
<b>TD<sub>01</sub>, LD<sub>01</sub>, &amp; LD<sub>01</sub> or TC, TC<sub>01</sub>, LC<sub>01</sub>, &amp; LC<sub>01</sub></b>	Lowest dose (or concentration) to cause lethal or toxic effects
<b>IARC</b>	International Agency for Research on Cancer
<b>NTP</b>	National Toxicology Program
<b>RTECS</b>	Registry of Toxic Effects of Chemical Substances
<b>BCF</b>	Bioconcentration Factor
<b>TL<sub>m</sub></b>	Median threshold limit
<b>log K<sub>ow</sub> or log K<sub>oc</sub></b>	Coefficient of Oil/Water Distribution

### REGULATORY INFORMATION:

<b>WHMIS</b>	Canadian Workplace Hazardous Material Information System
<b>DOT</b>	U.S. Department of Transportation
<b>TC</b>	Transport Canada
<b>EPA</b>	U.S. Environmental Protection Agency
<b>DSL</b>	Canadian Domestic Substance List
<b>NOHSC</b>	National Occupational Health and Safety Commission (Australia)
<b>NDSL</b>	Canadian Non-Domestic Substance List
<b>PSL</b>	Canadian Priority Substances List
<b>TSCA</b>	U.S. Toxic Substance Control Act
<b>EU</b>	European Union (European Union Directive 67/548/EEC)
<b>WGK</b>	Wassergefährdungsklassen (German Water Hazard Class)
<b>HMIS-III</b>	National Paint & Coatings Association Hazardous Materials Identification System

### WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

Class A	Class B	Class C	Class D1	Class D2	Class D3	Class E	Class F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

### EC (67/548/EEC) INFORMATION:

C	E	F	N	O	T	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful

### CLP/GHS (1272/2008/EC) PICTOGRAMS:

GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful Irritating	Health Hazard	Environment